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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Ian David Kaehne

SERIAL NO. 10/509,803

GROUP: 1761 1794

FILED: March 30, 2004

EXAMINER: Helen F Pratt

DECLARATION SUBMITTED UNDER 37 C.F.R. § 1.132Honorable Commissioner  
of Patents and Trademarks  
Washington, D.C. 20231

Sir:

I, Ian David Kaehne, do hereby declare the following:

1. I reside at 6 Wattle Grove, Belair, South Australia, Australia.
2. I am the inventor of the invention claimed in the present patent application.
3. I have prepared 34 samples with variation in their mineral composition of the groups A, B, C and D as set out in the accompanying exhibit IDK-1. The methods of preparation is as set out in the preset specification using water that was double distilled deionized and filtered.

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APR 14 2010

4. Sample 1 is a mineral water with concentrations of group A and B minerals as set out in claim 12.

Samples 2 through 5 include the same concentrations as sample 1 of all group A and B minerals except calcium which concentration is varied. Thus sample 2 has calcium at a concentration a little below the lower limit defined in claim 1, sample 3 has calcium at the lower limit defined in claim 1, sample 4 has calcium at the upper limit defined in claim 1, and sample 5 has calcium a little above the upper limit defined in claim 1.

Samples 6 to 9 include group A and B minerals at the same concentrations as sample 1 except magnesium which concentration is varied in similar manner to which calcium is varied above.

Samples 10 through 13 include group A and B minerals at the same concentrations as sample 1 except phosphorus which concentration is varied in similar manner to which calcium is varied above.

Samples 14 through 17 include group A and B minerals at the same concentrations as sample 1 except potassium which concentration is varied in similar manner to which calcium is varied above.

Samples 18 through 21 include group A and B minerals at the same concentrations as sample 1 except silicon which concentration is varied in similar manner to which calcium is varied above.

Samples 22 through 25 include group A and B minerals at the same concentrations as sample 1 except sodium which concentration is varied in similar manner to which calcium is varied above.

Samples 26 through 29 include group A and B minerals at the same concentrations as sample 1 except chlorine which concentration is varied in similar manner to which calcium is varied above.

Sample 30 includes the same concentrations of group A and B as sample 1 as well as group C and D minerals at concentrations as set out in claim 11.

Sample 31 is the same as sample 30 except that it includes group C and D minerals at the upper limits set out in claim 1, and sample 32 has group C and D minerals little above the upper limits set out in claim 1. Sample 33 has a subset of the group C and D minerals above the upper limit set out in claim 1 namely boron, copper, iodine, selenium, zinc and iron.

Sample 34 is water.

5. I conducted the tastings on April 5, 2010. I first rinsed my mouth with purified water, and then tasted the first sample. Following the tasting I rinsed my mouth again allowing a two minutes and then tasted the next, and repeated the process for all the samples.

6. The result of my tasting are recorded on photocopies of Table 1 of the present application, and exhibited hereto as IDK-1 as a bundle are true copies of the results recorded.

The scores are recorded as a continuum, so that the results are to a degree graphic, this can be seen as for sample 1 that the marks recorded vary within the "acceptable/balanced" square depending on how close to ideal they tasted.

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APR 14 2010

7. In a general sense addition of the C and D minerals at levels defined in claim 7 or 11 provide a little more balance to the taste of the overall composition, giving a slightly fuller flavour.

A comparison of sample 1 and 30 shows that the taste components of sample 30 are generally more centred, and notably the mineral sensation component (8). Where the C and D minerals are at their upper limit as in sample 31, mineral water is still scored within the acceptable range, however, where all or some of the minerals are above the range defined in claim 1 as in samples 32 and 33 the mineral water is "too strong" for initial mouthfeel, saltiness and mineral sensation, too persistent and unbalanced.

8. Samples 2 through 29 show the impact that varying the concentration of group A and B minerals has on taste components. In general these data show that the where the upper or lower limits for the individual elements is reached the taste components measured are within or quite close to the acceptable region, and overall provide for an overall acceptable taste, where the concentrations are over or under there are more extreme deviations of one or more of the taste components, that overall make the manufactured water unpalatable.

9. Sample 34 is water with no minerals added. In a general sense this has no flavor and does not provide a satisfying taste sensation. Whilst water has an acceptable acidity/alkalinity balance and palate balance taste components, the other desirable taste components are not present.

10. I have also tasted sample #5 referred to in paragraph 18 of the declaration by Neil Thomas Paulett of July 1, 2009 herein, sample # 5 having phosphorous present at levels disclosed in Someya and concur with Mr Paulett that it was a dreadful tasting mineral water with a particularly strong metallic flavour.

In my experience in formulating manufactured minerals waters for the present invention, it would not be possible to adjust other minerals levels to accommodate the off tastes produced by the elevated phosphorus level to overall bring the mineral water to an acceptable taste.

The undersigned declares that all statements made herein based upon knowledge are true, and that all statements made used upon information and beliefs that are believed to be true, and further, that these statements are made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such wilful false statement may jeopardise the validity of the application or any patent issued therein.

Dated: 10<sup>th</sup> April, 2010

  
Ian David Kaehue

## **Exhibit IDK-1**

Group		1	2	3	4	5
A (mg/L)	Ca	59	20	25	92	93
	Mg	13				→
B (mg/L)	P	30				→
	K	120				→
	Si	0.75				→
	Na	8				→
	Cl	9				→
C (µg/L)	B					
	Cr					
	Co					
	Cu					
	I					
	Li					
	Mn					
	Mo					
	Ni					
	Se					
	Sn					
	V					
	Zn					
D (µg/L)	Fe					



Group		6	7	8	9	10
A (mg/L)	Ca	59				
	Mg	4.8	6	18	21.6	13
B (mg/L)	P	30				12
	K	120				
	Si	0.75				
	Na	8				
	Cl	9				
C (µg/L)	B					
	Cr					
	Co					
	Cu					
	I					
	Li					
	Mn					
	Mo					
	Ni					
	Se					
	Sn					
	V					
	Zn					
D (µg/L)	Fe					

Group		11	12	13	14	15
A (mg/L)	Ca	59				→
	Mg	13				→
B (mg/L)	P	15	80	96	30	→
	K	120		→	40	50
	Si	0.75				→
	Na	8				→
	Cl	9				→
C (µg/L)	B					
	Cr					
	Co					
	Cu					
	I					
	Li					
	Mn					
	Mo					
	Ni					
	Se					
	Sn					
	V					
	Zn					
D (µg/L)	Fe					

Group		16	17	18	19	20
A (mg/L)	Ca	59				→
	Mg	13				→
B (mg/L)	P	30				→
	K	180	216	120		→
	Si	0.75	→	0.36	0.45	1.5
	Na	8				→
	Cl	9				→
C (µg/L)	B					
	Cr					
	Co					
	Cu					
	I					
	Li					
	Mn					
	Mo					
	Ni					
	Se					
	Sn					
	V					
	Zn					
D (µg/L)	Fe					

Group		21	22	23	24	25
A (mg/L)	Ca	59				
	Mg	13				
B (mg/L)	P	30				
	K	120				
	Si	1.8	0.75			
	Na	8	2.4	3	30	36
	Cl	9				
C (µg/L)	B					
	Cr					
	Co					
	Cu					
	I					
	Li					
	Mn					
	Mo					
	Ni					
	Se					
	Sn					
	V					
	Zn					
D (µg/L)	Fe					

Group		26	27	28	29	30
A (mg/L)	Ca	59				→
	Mg	13				→
B (mg/L)	P	30				→
	K	120				→
	Si	0.75				→
	Na	8				→
	Cl	2.4	3	28	33.6	9
C (µg/L)	B					19
	Cr					0.1
	Co					0.1
	Cu					4.3
	I					1.3
	Li					0.4
	Mn					0.4
	Mo					0.5
	Ni					0.1
	Se					34
	Sn					0.4
	V					0.63
	Zn					26
	Fe					5

Group		31	32	33	34
A (mg/L)	Ca	59	→	→	0
	Mg	13	→	→	0
B (mg/L)	P	30	→	→	0
	K	120	→	→	0
	Si	0.75	→	→	0
	Na	8	→	→	0
	Cl	9	→	→	0
C (µg/L)	B	60	72	(72)	0
	Cr	0.5	0.5	0.5	0
	Co	0.5	0.5	0.5	0
	Cu	12	14.4	(14.4)	0
	I	6	7.2	(7.2)	0
	Li	1.5	1.8	1.5	0
	Mn	1.5	1.8	1.5	0
	Mo	1.5	1.8	1.5	0
	Ni	0.5	0.5	0.5	0
	Se	100	120	(120)	0
	Sn	1.5	1.8	1.5	0
	V	0.1	0.12	0.1	0
	Zn	100	120	(120)	0
D (µg/L)	Fe	20	24	(24)	0

## **Exhibit IDK-2**

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (limc, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 1

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (limc, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 2



Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 3

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 4

Table 1 Taste components for testing formulations of mineral water.

Sample 5-

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation ( 2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 6

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation ( 2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 7

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 8

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 9

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 10

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 11

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 12

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components					
Qualitative Rating Description					
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnetic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 13

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components					
Qualitative Rating Description					
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnetic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 14

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 15

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 16

Table 1 Taste components for testing formulations of mineral water.

Sample 17

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0-2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2-15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 18

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0-2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2-15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic



APR 14 2010

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 19

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 20

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 21

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 22

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0-2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2-15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 23

Table 1 Taste components for testing formulations of mineral water.

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0-2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2-15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Sample 24

Table 1 Taste components for testing formulations of mineral water.

Sample 25

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 26

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 27

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 28

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 29

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	sourpy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Salinity" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 30

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	sourpy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Salinity" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 31

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 32

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnestic) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	'Saltiness' sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	'Mineral' sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 33

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Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic

Table 1 Taste components for testing formulations of mineral water.

Sample 34

Rating of Taste Components					
Taste Components	Qualitative Rating Description				
1.	Initial sensation upon intake (0 - 2 seconds)				
	none	weak	acceptable	too strong	repulsive
2.	Mouthfeel sensation (2 - 15 Seconds)				
	none	weak	acceptable	too strong	repulsive
3.	Palate balance characteristics (while tasting)				
	back only	predominantly back	balanced	predominantly front	front only
4.	Palate persistence characteristics (after swallowing)				
	no persistence	dissipates quickly	acceptable	too extended	persistent
5.	Acidity/Alkalinity				
	very acid/sour	acid	acceptable	too alkaline	soapy
6.	"Earthy" (lime, calcic, magnesian) characteristics				
	absent	too weak	acceptable	too strong	excessive
7.	"Saltiness" sensation characteristics				
	absent	too weak	acceptable	too strong	very saline
8.	"Mineral" sensation characteristics				
	absent	too weak	acceptable	too strong	metallic